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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/680,082

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Masaaki Asano

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EXAMINER

HOLLWEG, THOMAS A

ART UNIT

PAPER NUMBER

2879

MAIL DATE

DELIVERY MODE

09/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/680,082	Applicant(s) ASANO ET AL.	
	Examiner Thomas A. Hollweg	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 3, 2009, has been entered.
2. Claims 9-13 are canceled. Claims 14-16 are added. Claims 1-8 and 14-16 are currently pending.

Claim Objections

3. The following claims are objected to because of the following informalities:
 - a. The objection to Claim 2 is maintained from the Final Office Action of March 3, 2009. That objection was because claim 2 states that "the color conversion member further comprises the color filter layer provided on the transparent substrate side of said any one of the color conversion layers or between said any one of the color conversion layers and the color conversion layers adjacent to said any one of the color conversion layers." This clause is identical to the last clause of claim 1, therefore is redundant and does not further limit the invention claimed in claim 2. A dependent claim includes all of the limitations of the parent claim (see 37 C.F.R. 1.75 (c)). Therefore, because this limitation exists twice, and is described as further comprised in claim 2, it is

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unnecessary repetition, and may cause confusion. Examiner agrees with applicant that the last clause of claim 2 does not exist in claim 1, however, this does not justify the confusing repetition that does exist.

b. Claim 2 is further objected to because the phrase "a color filter layer is provided on the transparent substrate side of at least one type of the color conversion layers" indicates that this color filter layer is not the color filter layer introduced in claim 1, suggesting that there are more than one color filter layers. Because multiple color filter layers is not supported by the disclosure, it is assumed for examination that the color filter layer of the above recited clause is the same color filter layer introduced in claim 1. To avoid confusion it is suggested that it is called "the color filter" or "said color filter" in subsequent claims.

Appropriate correction is required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the color filter layer for a green color is further provided on the light transparent layer side of the second color conversion layer of claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Eida et al., U.S. Patent No. 5,909,081.**

8. **With regard to claim 15**, in figure 13, Eida discloses a color conversion member comprising a transparent substrate (11); two or more types of color conversion layers (3), and a color filter layer (14), the color conversion layers (3) functioning to convert incident lights for respective pixels to outgoing lights of colors different from the incident

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lights, said two or more color conversion layers (3) being arranged on said transparent substrate (11), any one of the color filter layers (14) having a convex surface, and the color filter layer (14) being provided on the transparent substrate side of any one of the color conversion layers (3) or between said any one of the color conversion layers (3) and the color conversion layers (3) adjacent to said any one of the color conversion layers (3) (col. 24, lines 26-30).

9. The examiner notes that claim 15 requires that two or more color conversion layers being arranged on said transparent substrate and the color filter layer being provided on the transparent substrate side of any one of the color conversion layers. Therefore, because the color filter may be between the color conversion layers and the substrate the limitation that the color conversion layers are on the substrate will be interpreted as not requiring the color conversion members to be directly on the substrate.

10. **With regard to claim 16**, in figure 13, Eida discloses that one of the color conversion layers (3) has a convex surface (col. 24, lines 26-30).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Codama et al., U.S. Patent No. 6,121,726, in view of Eida.**

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13. **With regard to claim 1**, in figures 1 and 5, Codama discloses that a color conversion member comprising a transparent substrate (1, 21), color conversion layers (4), and a color filter layer (2), said color conversion layers functioning to convert incident lights for respective pixels to outgoing lights of colors different from the incident lights, said color conversion layers being arranged on said transparent substrate (1, 21), any one of the color conversion layers (4) having a convex surface (fig. 5); and said color filter layer (2) being provided on the transparent substrate (1, 21) side of any one of the color conversion layers (4) or between said any one of the color conversion layers (4) and the color conversion layers (4) adjacent to said any one of the color conversion layers (4) (col. 3, lines 49-56; col. 5, lines 14-32).

14. Codama does not disclose that there are two or more types of color conversion layers.

15. Eida, in figures 9-13, discloses a color conversion member having two or more types of color conversion layers (3R and 3G) (col. 23, line 45 – col. 24, line 25) to improve the color purities of red and green in a full color display when the light source emits a blue light.

16. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Codama device using a blue light source and two or more types of color conversion layers, as taught by Eida, so that the color purities of the red and green is improved.

17. **With regard to claim 2**, in figures 1 and 5, Codama discloses that the color conversion member further comprises the color filter layer (2) provided on the

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transparent substrate (1, 21) side of said any one of the color conversion layers (2) or between said any one of the color conversion layers (2) and the color conversion layers (2) adjacent to said any one the color conversion layers (4), a color filter layer (4) is provided on the transparent substrate (1, 21) side of at least one type of the other color conversion layers (4) (col. 3, lines 49-56).

18. **With regard to claim 3**, in figures 1 and 5, Codama discloses that a black matrix (29) having openings is further provided on the transparent substrate (1, 21) and said color conversion layers (4) are provided in the openings (col. 4, line 37).

19. **With regard to claim 4**, the combined Codama and Eida device described in the rejection of claim 1 has said two or more types of the color conversion layers (3) comprise a first color conversion layer (3R) for converting incident light of blue color and/or green color to outgoing light of red color, a second color conversion layer (3G) for converting said incident light to outgoing light of green color, and a light transparent layer (7) for transmitting said incident light as such (see Eida, figure 11), and a color filter layer (2r) for a red color is provided on the transparent substrate (1, 21) side of the first color conversion layer (4) or between the first color conversion layer (4) and other color conversion layers (4) adjacent to the first color conversion layer (4) (see Codama, figure 1).

20. **With regard to claim 5**, the combined Codama and Eida device described in the rejection of claim 1 has a color filter layer for a green color (2g) is further provided on the light transparent layer (21) side of the second color conversion layer (4) (see Codama, figure 5, with a green color conversion layer as taught by Eida).

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21. **With regard to claim 6**, in figures 1 and 5, Codama discloses that the color conversion member is used in an EL display (col. 2, line 46).

22. **With regard to claim 7**, in figures 1, 2 and 5, Codama discloses an EL display comprising the color conversion member (4) and a luminescent part (3) comprising a transparent electrode layer (22), an EL layer (25), and a backside electrode layer (27), said luminescent part (3) being provided on the color conversion layers (4) so as to correspond to each of the color conversion layers (4) (col. 4, lines 4-12).

23. **With regard to claim 8**, Codama does not expressly disclose that said luminescent part is provided through an overcoat on said color conversion layers in said color conversion member.

24. Eida, in figures 9-13, discloses that said luminescent part (1a) is provided through an overcoat (12) on said color conversion layers (3) in said color conversion member (col. 23, line 45 – col. 24, line 25).

25. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Codama and Eida device of claim 1, where the luminescent part is provided through an overcoat on said color conversion layers in said color conversion member, as taught by Eida, to provide protection for the organic materials in the luminescent parts.

26. **With regard to claim 14**, Codama does not expressly disclose that any one of the color filter layers has a convex surface.

27. Eida, in figure 13, teaches a color filter layer (14) having a convex surface to accommodate the black matrix.

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28. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Codama and Eida device of claim 1, where the color filter layers have a convex surface, as taught by Eida, to accommodate the black matrix.

Response to Arguments

29. Applicant's arguments have been fully considered but are moot in light of the new grounds for rejection.

Conclusion

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Hollweg whose telephone number is (571) 270-1739. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm E.S.T..

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TH/

/NIMESHKUMAR D. PATEL/

Supervisory Patent Examiner, Art Unit 2879